PAE7

VISION IMPAIRMENT AS AN INDEPENDENT RISK FACTOR OF INSTITUTIONALIZATION

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OBJECTIVES: To estimate the risk of being in institution with vision impairment. **METHODS:** Two national surveys were pooled together: 1) 2075 institutions (children or adults with handicap, old people and psychiatric centers) were selected at random from the French Health Ministry files in 18 predefined strata. Of the 15,403 subjects taken at random, 14,603 interviews (94.9%) documented handicap; and 2) Level of handicap was documented in a randomized, stratified sample of 356,208 citizens living in the community. From this sample, 21,760 subjects were further selected at random and 16,945 persons were interviewed. Handicaps (vision, audition, speaking, brain, visceral, motor and other) and activity of daily living (ADL) were then collected. The odds-ratio (OR) of being in institution was estimated using stepwise logistic regressions with age, geographical area, handicaps and ADL as co-variables. **RESULTS:** Patients in institution were more often female (64.3% versus 52.4%) and older (68.7 versus 38.0 years old) then patient living at home. They more often had handicaps (OR—speaking: 6.56; brain: 6.39; motor: 4.40; visceral: 2.87; audition: 2.37; other: 1.39). They were less often able to perform their ADL (46.2% versus 97.1%) without assistance. The OR to be in institution when having vision handicap was 8.40 without adjustment. This figure became 1.53 after adjustment on age, geographical area and other handicaps and 1.24 after adjustment on age, geographical area and ADL. **CONCLUSION:** Vision handicap is an independent risk factor of institutionalization. Preserving vision on long term might reduce or postpone old subject's institutionalization by controlling incapacity and dependency.

PAE8

SCORING OF VISUAL FIELD MEASURED THROUGH HUMPHREY PERIMETRY: PRINCIPAL COMPONENT VARIMAX ROTATION FOLLOWED BY CLUSTERING ANALYSIS

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OBJECTIVES: To issue orthogonal scores from the 52 standardized data collected by a Humphrey visual field (VF) perimetry that maximize between-variance and minimize within-variance. **METHODS:** 437 VF were collected and classified into 7 clinical groups: irregularities of VF (IVF), Nasal step (NaS), Arcuate scotoma (AC), Para-central scotoma (PCS), Blind spot enlargement (BSE), Diffuse deficit (DD), Advanced deficit (AD). Number and contents of scores were identified using a principal component analysis (Varimax) followed by an ascending hierarchical clustering analysis. Internal consistency was checked with Cronbach alpha. Scores were compared across the clinical groups with an Anova. **RESULTS:** Patients totaling 54.7% of the patients were older than 60. Mean defect was −9.21 on average and PSD was 6.50. Six scores were identified: 4 peripheral scores (Nasal Superior NS, Nasal Inferior NI, Temporal Superior TS, Temporal Inferior TI) and 2 para-central scores (superior PCSS, inferior PCSI). Cronbach alphas were always between 0.90 and 0.97. The six scores decreased simultaneously from IVF, DD to AD. AC had lower scores in NS, NI and TS. PCS had a lower PCSS. BSE had lower scores in TS and TI. NaS had lower scores in NS and NI. **CONCLUSION:** Six orthogonal scores were found to be optimal from the Humphrey perimetry matrix. Internal reliability was good. Ability to discriminate between clinical subgroups was found. Further analyses on longitudinal data need to be performed to confirm our findings.

EYE DISORDERS—Cost Studies

PAE9

COST AND EFFECTIVENESS OF BRINZOLAMIDE VERSUS DORZOLAMIDE IN THE TREATMENT OF GLAUCOMA: AN ANALYSIS CONDUCTED USING THE UNITED-KINGDOM GENERAL PRACTITIONER RESEARCH DATABASE

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OBJECTIVE: To compare the cost and effectiveness of brinzolamide and dorzolamide using data collected in the United-Kingdom General Practitioner Research Database **METHODS:** Files of patients with a diagnosis of ocular hypertension or glaucoma, or treated with a topical IOP lowering treatment were extracted. Patients starting treatment with dorzolamide or brinzolamide from August 2000 were selected. A treatment failure was defined as a regimen change (adding or removing a topical treatment). Time to treatment failure was compared using a Cox model. The economic perspective was that of the NHS. The annual cost of therapy changes by treatment line (first, second, etc.) was calculated for year 2000; visit, medication and hospitalization costs were included. **RESULTS:** Of 49,799 patients selected, 146 were treated with brinzolamide and 1230 with dorzolamide. No statistically significant differences were found between the 2 groups in terms of patient and disease characteristics. Patients averaged 72.9 years old and were 56% female. Prescriptions totaling 21.1% of the prescriptions involved monotherapy and 14.8% were for first line treatment. After 1 year, 29.8% of the brinzolamide patients experienced a treatment failure compared to 46.0% with